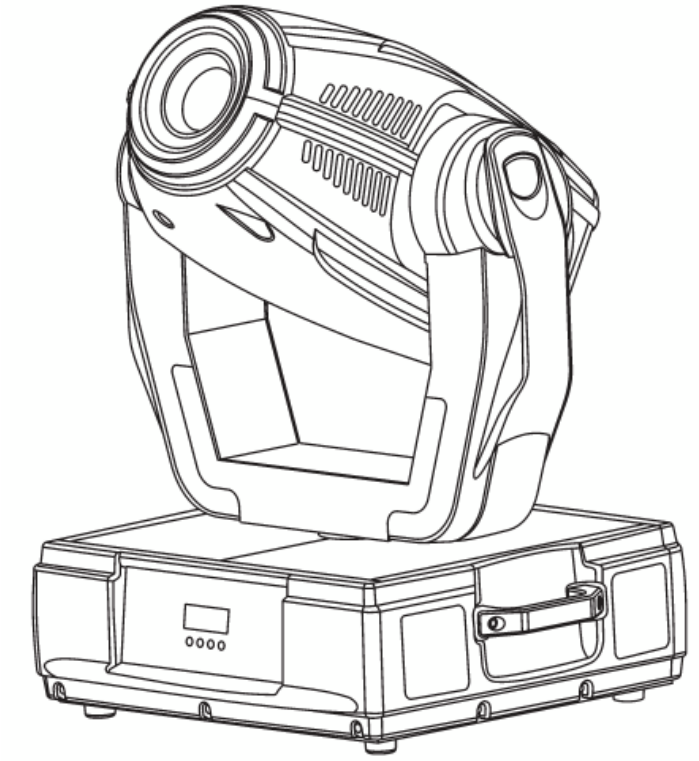
USER MANUAL



575 SPOT

Technical specifications

Power supply 220-250 V AC, 50/60 Hz ~
Power consumption 900 W
Fuse T 5 A, 250 V
Lamp OSRAM HSR575/2 or PHILIPS MSR 575/2, MSD575
Optical System

- High luminous-efficiency parabolic mirror and double condenser system
- Multi-Step Zoom (15°, 18°, 22°)
- All lenses are anti-reflection coated

Colors： **Color wheel 1,** 9 dichroic-filters plus white, color-wheel with variable rotation speed
Color wheel 2, 6 dichroic-filters, color temperature filters 3200 K and 6000 K, UV filter plus white
Gobos：**Static gobos,** 9 metal gobos plus full circle, Static gobo wheel cont. rotation
Rotating gobos, 3 metal gobos, 1 glass gobo and 2 multicolor dichroic gobo rotating in both directions at different speeds, Gobo indexing, Rotating gobo-wheel cont. Rotation,
Strobe：Strobe effect with variable speed (1 - 10 flashes per second)
Dimmer ： Smooth dimmer from 0 - 100 %
Prism ： 3-facet-prism rotating in both directions at different speeds
Focus：Motorized focus from near to far
Iris ： Motorized iris for different beam diameters
Effects： 16 Prism-Gobo Macros, Gobo-Shake function for static gobo-wheel, Preprogrammed pulse-effects
Motor ： 12 high-quality stepping-motors controlled by microprocessors
Pan/Tilt ： Pan movement range 530°, Tilt movement range 280°， 8/16 bit movement resolution
Temperatures： Maximum ambient temperature, 45° C, Maximum housing temperature, 80° C
Dimensions and weight, L x W x H: 470x450x580 mm
Net Weight 33 kg

DMX-Protocol, Function of the control channels - 16 bit protocol

Channel	Value	Function
1	0—255	Pan
2	0—255	Pan fine 16bit
3	0—255	Tilt
4	0—255	Tilt fine 16bit
5	0—250 251—252 253—255	Pan/Tilt move speed from fast to slow Pan/Tilt move fast Move fast when move the light is out
6	0—125 126—139 140—255	Switch on/off the lamp Reset Increase speed of cooling fan
7	0—127 128—190 191—255	Color-wheel1 Color flow from fast to slow Color flow from slow to fast in the opposite direction
8	0—127 128—255	Color-wheel2 White
9	0—2 3—64 65—127 128—255	No prism 3-facet prism clockwise rotate from fast to slow 3-facet prism anticlockwise rotate from slow to fast 6 kind of prism effect
10	0—79 80—223 224—255	Static gobo-wheel Gobo shake Gobo flow from slow to fast
11	0—222 223—225	Rotating gobo-wheel Rotating gobo flow from slow to fast
12	0—2 3—127 128—191 192—255	No function Rotating gobo rotate step by step by control Rotating gobo rotate clockwise from fast to slow Rotating gobo rotate anticlockwise from slow to fast
13	0—255	Iris from big to small
14	0—87 88—170 171—255	Zoom out and focus No zoom and focus Zoom in and focus
15	0—30 31—63 64—95	Dark Lighten Strobe from slow to fast

15	96—127 128—145 146—161 162—191 192—223 224—255	Lighten Fade out from slow to fast Fade in from fast to slow Lighten Strobe Lighten
16	0—255	Dimmer from dark to brightest

Function of the control channels - 8 bit protocol:

Channel	Value	Function
1	0—255	Pan
2	0—255	Tilt
3	0—249 250—252 253—255	Pan/Tilt move speed from fast to slow Pan/Tile move fast Move fast when move the light is out
4	0—255	Lamp on/off
5	0—127 128—191 192—255	Color-wheel1 Color flow from fast to slow Color flow from slow to fast in the opposite direction
6	0—127 128—255	Color-wheel2 White
7	0—2 3—64 65—127 128—255	No prism 3-facet prism rotate clockwise from fast to slow 3-facet prism rotate anticlockwise from slow to fast 6 kind of prism effect
8	0—79 80—223 224—255	Static gobo-wheel Static gobo shake Static gobo flow from slow to fast
9	0—222 223—255	Rotating gobo-wheel Rotating gobo flow from slow to fast
10	0—2 3—127 128—191 192—255	No function Rotating gobo rotate step by step by control Rotating gobo rotate clockwise from fast to slow Rotating gobo rotate anticlockwise from slow to fast
11	0—255	Iris from big to small
12	0—87 88—170 171—255	Zoom out and focus No zoom and focus Zoom in and focus
13	0—30 31—63 64—95 96—127 128—145 146—161 162—191 192—223 224—255	Dark Lighten Strobe from slow to fast Lighten Fade out from slow to fast Fade in from fast to slow Lighten Strobe Lighten
14	0-255	Dimmer from dark to brightest

Addressing：The Control Board on the top side of the MOVING HEAD575 allows you to assign the DMX fixture address, which is defined as the first channel from which the MOVING HEAD575 will respond to the controller. If you set, for example, the address to channel 5, the MOVING HEAD575 will use the channel 5 to 20 for control. Please, be sure that you don't have any overlapping channels in order to control each MOVING HEAD575 correctly and independently from any other fixture on the DMX data link. If two, three or more MOVING HEAD575 are addressed similarly, they will work similarly.For address setting follow this procedure:

1. Switch on the MOVING HEAD575 and wait until the fixture reset has finished (**"rSt"** is flashing at the display).
2. Press the **[Mode]** key in order to access the main menu. Browse through the menu by pressing the [Up] and [Down] keys until the display shows **"A001"**. Confirm by pressing **[Enter]** key and the letter **"A"** will flash.

3. Use the [Up] and [Down] keys to select the desired address.

4. Confirm by pressing **[Enter]** or **[Mode]** to cancel.

Controlling:

After having addressed all MOVING HEAD575 , you may now start operating these via your lighting controller.

Note:

After switching on, the MOVING HEAD575 will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the display will start to flash **"A001"** with actually set address.

This situation can occurr if: the 3 PIN XLR plug (cable with DMX signal from controller) is not connected with the input of the MOVING HEAD575, The controller is switched off or defective, if the cable or connector is defective or the signal wires are swap in the input connector.

Note:

It's necessary to insert the XLR termination plug (with 120 Ohm) in the last lighting in the link in order to ensure proper transmission on the DMX data link.

Remotely controllable functions

Switching on and off the lamp via the Control Board

1. Switch on the MOVING HEAD575 and wait until the fixture reset has finished.

2. Press the **[Mode]** key in order to access the main menu. Browse through the menu by pressing the [Up] and [Down] keys until the display shows **"LAMP"**. Confirm by pressing **[Enter]** key.

3. Use the [Up] and [Down] keys to select **"On"** for switching on the lamp and **"Off"** for switch off the lamp and press **[Enter]** to confirm or **[Mode]** to cancel.**Note,** It is also important to note that the discharge lamp is a cold restrike type, which means that it has to be cold before re-striking. For this reason, you have to wait 5 minutes (max. speed of fan must be adjusted) after having switched off the lamp before you can switch it back on again. If you try to switch on the lamp within 5 minutes after having switched it off, the MOVING HEAD575 will store this information and automatically ignite the lamp when the 5 minutes period has expired. The message **"HEAt"** will appear on the control board display at the back side of the MOVING HEAD575. If the ignition of the lamp is seven times unsuccessful, on the display will appear **"LA.Er"**, meaning that the lamp could be damaged or even missed, or there could be a failure on the ignitor or ballast.

Fan:

The MOVING HEAD575 is cooled by three axial fans - one each in the projector head and one in the base. The speed of the fan (and of course the noise) can be continuously reduced if very quiet performance is required.By the Control Board using the **"FAnS"** function you can choose 5 types of low fan speed operating. Please refer to the instructions under SPEC -Special functions.

Control Board:

The Control Board situated on the top side of the MOVING HEAD575 offers several features. You can simply set the lighting address, read the number of lamp or unit hours, switch on and off the lamp, run demonstration sequences, make a reset and also use special functions for manual control and service purposes. The main menu is accessed by pressing the **[Mode]** key - press this one so many times until the display shows message **"A001"** (with actually stored address). Browse through the menu by the pressing [Up] and [Down] keys - the display shows step by step these messages: **A001, rPAn, rTilt, 16br, Lati, Poti, LAMP, dEMo, rESE, SPEC**. Press **[Enter]** if you wish to select one of them. The functions provided are described inthe following sections and the function hierarchy is shown below.**Main functions**

- DMX 512 Address settings:

The letter **"A"** flashes. Use the [Up] and [down] keys to select required address (001 - 512) and press **[Enter]** to confirm or **[Mode]** to cancel and return to the main menu.

- Pan reverse:

This function allows you to invert the Pan-movement. Use the [Up] and [Down] keys to select **"On"** if you wish this feature or **"Off"** if you don't wish this feature and press **[Enter]** to confirm or **[Mode]** to cancel and return to the main menu.

- Tilt reverse:

This function allows you to invert the Tilt-movement. Use the [Up] and [Down] keys to select **"On"** if you wish this feature or **"Off"** if you don't wish this feature and press **[Enter]** to confirm or **[Mode]** to cancel and return to the main menu.

Movement resolution:

By this function you can adjust the desired movement resolution 8 or 16 bit. Use the [Up] and [Down] keys to select '**On**' if you wish the 16bit high resolution or **"Off"** if you wish only 8 bit resolution and press **[Enter]** to confirm or **[Mode]** to cancel and return to the main menu.

Note: If you adjust the 16 bit resolution the fixture will occupy 16 DMX channels, if you adjust the 8 bit resolution,the fixture will be operated by only 14 DMX channels. Please, check the DMX protocol.

- Lamp On time:

This option enables you to read the total number of hours that the lamp has been powered on. Press **[Enter]**or **[Mode]** to return to the main menu. In order to reset the counter to 0, you have to hold the Up- and Downbutton and press the Enter-button.

- Power On time:

By this option you can read the total number of hours that the MOVING HEAD575 has been powered on. Press **[Enter]** or **[Mode]** to return to the main menu.

- Switch on / off the lamp:

Use the **[Up]** and **[Down]** keys to select **"On"** if you wish the switch on the lamp or **"Off"** if you wish switch off the lamp and press **[Enter]** to confirm or **[Mode]** to cancel and return to the main menu.

- Demo sequences:

This function allows you to run a special demo-test sequences without an external controller, which will show you some possibilities of using MOVING HEAD575. Press **[Up]** and **[Down]** keys to select the **"Mod1"** or **"Mod2"**sequences. The **"Mod1"** is suitable for projections on the wall, ceilling or ground without any headmovement, the **"Mod2"** uses all MOVING HEAD575 functions and therefore is good for a complete introduction of the fixture.45

- Reset Function:

Press **[Enter]** key to run reset. This option enables the MOVING HEAD575 to index all effects (functions) and return to their standard positions. **SPEC -Special functions** Use the **[Up]** and **[Down]** keys to browse through the special functions and select the one by pressing **[Enter]**.

- Manual control of effects: This function allows you to control manually the channel functions of the fixture. Use the [Up] and [Down] keys to select desired function and press **[Enter]** to adjust the effect or **[Mode]** to cancel and return to the menu.

- Lamp On automatically: This menu allows you to turn the lamp on after switching the fixture on and switch on/off the lamp light sensor.

- Lamp On after switching the fixture on: This function enables to switch on the lamp automatically after switching on the fixture. Use the [Up] and [Down] keys to select **„On"** if you wish to switch on the lamp

automatically after

switching on the fixture or **„Off"** if you wish the lamp off after switching on the fixture and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

- Switch On/Off the lamp light sensor: Use the **[Up]** and **[Down]** keys to select **"On"** if you wish to switch the lamp light sensor On and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.The option"On" is for the 46 standard operation. Use the **[Up]** and **[Down]** keys to select **"Off"** if you wish to switch the lamp light sensor Off and

press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

Important: The option"Off" is for "emergency operation" only if the lamp light sensor is

defective and you will wait for a delivery of the spare light sensor! If the lamp light sensor was switched Off, the error messages **"LAEr,SnEr,HEAt"** will not appear on the display (only the message **"HEAt"** will appear if the lamp was turned Off and On within 5 minutes) and at switching On of the lamp the electronics will still try to ignite the lamp until it shines (even when the lamp is damaged or absent), on this account some electronics parts could be damaged!

- DMX values: Readout DMX values of each channel received by the fixture. Use the **[Up]** and **[Down]** keys to select desired channel and press **[Enter]** to read its value coming to the fixture or **[Mode]** to cancel and return to the menu.

- Display-adjusting: This function allows you to adjust the display settings:

- Display intensity: With this function, you can adjust the display-intensity from 20 % to 100 %. Use the **[Up]** and **[Down]** keys to select the level of the display-intensity and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

- Display-reverse: With this function, you can rotate the display by 180°. Use the **[Up]** and **[Down]** keys to select **"normal display"** or **"display turned by 180°"** and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

- Display-On: This function allows you to keep the display on or to turn off automatically 2 minutes after last pressing any key on the control board. Use the **[Up]** and **[Down]** keys to select **"On"** if you wish to keep the display on or **"Off"** if you wish to turn off automatically 2 minutes after last pressing any key on the Control Board and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

- PAN/TILT-Feedback: This function allows to return the Mowing Head to the required position after changing the position by external force (e. g. by stroke). Use the **[Up]** and **[Down]** keys to select **"On"** if you wish to enable this function or **"Off"** if you wish not to return the Moving Head to the required position and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.

Note: If feedback was switched Off, the PAN/TILT-position is changed by external force and feedbeck is switched On again, the Moving Head might not to be synchronized with the DMX signal. You have to make a reset in order to synchronize the Moving Head with the DMX signal.

- Lamp off via DMX: This function allows you to switch off the lamp by DMX. Use the **[Up]** and **[Down]** keys to select **"On"** if you want to switch off the lamp by DMX or **"Off"** if you don't want to switch off the lamp by DMX and press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu.47

- Temperature

Inside temperature readouts of the fixture in Celsius. Inside temperatures below 80° C are not critical. 80° C and more lead to the lamp being switched off. Please note that the outside temperature should not exceed 45° C.

- Fan speed operating

By using this function you can choose 5 types of fan speed operating. Browse through this menu by the pressing **[Up]** and **[Down]** keys - the display shows step by step the following messages: **"Auto, HIGH, reG, Lo.HI, Lo.OF"**. Press **[Enter]** if you wish to select one of them or **[Mode]** to cancel and return to the menu.

- continuous controlling of the fan speed without the DMX value

This mode is similar to "reG", but the initial level of the fan speed can´t be adjusted by DMX.

- high speed of the fans

The cooling fans work on max. speed (max. cooling).

- continuous controlling of the fan speed

The fan automatically raises its speed in order to control inside temperature of the lighting, if the temperature inside increases about certain level (the low fan speed reduces the cooling of the lighting). This cycle can repeat several times until the temperature inside is on a suitable level.

- low/high speed of the fan operating

The fan keeps the adjusted low speed until the temperature exceeds max. inside temp. of the fixture, then the MH-840 automatically switches from low to high fan-speed.

- low speed / switch off the lamp operating

The fan keeps the adjusted low speed until the temperature exceeds max. inside temp. then the MH-840 automatically switches off the lamp.

Note: In the mode “HIGH“ and “Auto“- the fan speed can´t be adjusted by DMX.

- Default settings

Press **[Enter]** to reset all fixture personalities (not the adjusting functions) to the default values. On the display will appear **„rSt”** meaning that the fixture makes the reset. See the table of personality setting and their default positions. PAN-reverse TILT-reverse Resolution Lamp On automatically Display permanent on Displayintensity Displayreverse Feedbackfonction Lamp Off via DMX Ventilation fan

Display Default value (shaded) Personality: Switch on/off lamp light sensor 48

- Adjusting the default positions of colour, gobo and effect wheels

By this function you can calibrate and adjust the colour, gobo and effect wheels to their standard/right positions. Use the [Up] and [Down] keys to browse through the adjusting menu - the display shows step by step these messages: **" PAn, Tilt, SPEd, Col1, Col2, PriS, SGob, rGob, Grot, IriS, Foc, Stro, dimr, FCAL "** by which you can adjust the fixture to the required / desired position (0-255) before the function calibration. Then when the positioning is finished use the last **"FCAL"** function (Fixture calibration).

1. Calibration via the control board: Press **[Enter]** and the **[Up]** and **[Down]** keys in order to display the following messages: **"Col1, Col2, PriS, SGob, rGob, Grot "** for very smooth function calibration. Select one of them, press **[Enter]** and use the **[Up]** and **[Down]** keys in order to adjust their right value from 0 to 255. Then press **[Enter]** to confirm or **[Mode]** to cancel and return to the menu. This can be repeated for each calibration parameter if it is required. When the calibration is finished, it is necessary to use the **"ArES"** function in order to write the calibration values to the memory (EEPROM) and to make a reset in order to check the newly adjusted positions of the colour, gobo and effect wheels. When the reset of the fixture is finished, the display will show the **"FCAL"** message. Press **[Enter]** to repeat the calibration or **[Mode]** to return to the **"AdJ"** menu.

2. Calibration via the external controller: Press **[Enter]** and the **[Up]** and **[Down]** keys in order to display the following messages: **"Colo, EFEC, rGob, Grot"** - calibration parameters. Select one of them and press **[Enter]**. Now you can calibrate the colour, gobo and effect wheel by your controller. The DMX calibration protocol is described in the table mentioned below.

DMX Calibration protocol:

After having calibrated required functions press **[Enter]** to confirm (or **[Mode]** to cancel and return to the menu without reset by the **"ArES"** function) and use the **"ArES"** function in order to write the calibration values to the memory (EEPROM) and to make a reset in order to check the new adjusted positions of the colour, effect and rot. gobo wheels and gobo indexing. **Error and information messages** This message appears if you try to switch on the lamp within 5 minutes after having switched it off (the lamp is too hot).

The message will appear on the display if the lamp doesn't ignite within 28 seconds. The MOVING HEAD575 will store this information and automatically ignite the lamp when the 5 minutes period has expired. **Caution:** Please note that this function is disabled if the lamp light sensor is switched off (function "EnSn"). The ignition of the lamp is seven times unsuccessful (the HEAt message appeared six times before), and the display shows **"LAEr"**, meaning that the lamp could be damaged or even missed, the fixture is overheating (this can occur if the ambient temperature is 45° C or more) or there could be a failure on the ignitor or ballast. Please place or replace the lamp, check the ambient temperature or contact your dealer if the situation was not caused by the lamp. **Caution:** Please note that this function is disabled if the lamp light sensor is switched off (function "EnSn"). This message informs you that the main PCB does not communicate correctly with the Control Board. (Color-wheel 1 error) This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset. (Color-wheel 2 error) This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset. (Rotating gobo-wheel error) This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The rotating gobo-wheel is not located in the default position after the reset. (Rotating gobo indexing error) This message will appear after the reset of the fixture and if the magneticindexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The rotating gobo is not located in the default position after the reset. (Static gobo-wheel error) This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The gobo-wheel is not located in the default position after the reset.(Prism-wheel error) This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the ain PCB). The prism-wheel is not located in the default position after the reset. This error message informs you that the fixture was overheating (occured if the ambient temperature is 45° C or more) and that the relay switched off the lamp. This message will appear on the display until the temperature will be on a suitable level, then the display will show the HEAt message meaning the lamp is too hot (explanation see above). This message appears if the lamp lighting sensor is failed. Please contact your dealer.

Caution: Please note that this function is disabled if the lamp light sensor is switched off (function "EnSn"). This message will appear if the fixture was shortly disconnect from the mains. (PAN-yoke movement error) This message will appear after the reset of the fixture if the yoke's magneticindexing circuit malfunction (sensor failed or magnet missing) or the stepping-motor is defective (or its driving IC on the main PCB). The yoke is not located in the default position after the reset. (TILT-head movement error) This message will appear after the reset of the fixture if the head's magneticindexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driving IC on the main PCB). The head is not located in the default position after the reset. This message will appear if the frequency of the mains is not standard 50 or 60 Hz.

Cleaning and maintenance

The operator has to make sure that safety-relating and machine-technical installations are inspected by an expert after every four years in the course of an acceptance test. The operator has to make sure that safety-relating and machine-technical installations are inspected by a skilled person once a year. The following points have to be considered during the inspection:

1) All screws used for installing the devices or parts of the device have to be tighly connected and must not be corroded.

2) There must not be any deformations on housings, fixations and installation spots (ceiling, suspension, trussing).

3) Mechanically moved parts like axles, eyes and others must not show any traces of wearing (e.g. material abrading or damages) and must not rotate with unbalances.

4) The electric power supply cables must not show any damages, material fatigue (e.g. porous cables) or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

Disconnect from mains before starting maintenance operation!

DANGER TO LIFE! We recommend a frequent cleaning of the device. Please use a moist, lint-free cloth. Never use alcohol or solvents!

The lens has to be replaced when it is obviously damaged,

so that its function is impaired, e. g. due to cracks or deep scratches!

CAUTION! The objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the

Light-output very quickly. The cooling-fans should be cleaned monthly. The gobos may be cleaned with a soft brush. The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet. The dichroic colour-filters, the gobo-wheel and the internal lenses should be cleaned monthly. To ensure a proper function of the gobo-wheel, we recommend lubrication in six month intervals. The quantity of oil must not be excessive in order to avoid that oil runs out when the gobo-wheel rotates. There are no serviceable parts inside the device except for the lamp and the fuse. Maintenance and service operations are only to be carried out by authorized dealers. Please refer to the instructions under "Installing/Replacing the lamp".

Replacing the fuse

If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace the fuse by a fuse ofsame type and rating.

Before replacing the fuse, unplug mains lead.

Procedure:

Step 1: Unscrew the fuseholder on the rearpanel with a fitting screwdriver from the housing (anticlockwise).

Step 2: Remove the old fuse from the fuseholder.

Step 3: Install the new fuse in the fuseholder.

Step 4: Replace the fuseholder in the housing and fix it.

Should you need any spare parts, please use genuine parts. If the power supply cable of this device becomes damaged, it has to be replaced by authorized dealers only in order to avoid hazards. Should you have further questions, please contact your dealer.